

DuPont Performance Polymers Minlon® 73GM40 NC010 Nylon 6 (Unverified Data**)

Category : Polymer , Thermoplastic , Nylon , Nylon 6 , Nylon 6, Glass/Mineral Reinforced

Material Notes:

Minlon® 73GM40 NC010 is a 40% mineral/glass reinforced, heat stabilized polyamide 6 resin for injection molding. Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Minlon-73GM40-NC010-Nylon-6-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.46 g/cc	0.0527 lb/in³	DAM; ISO 1183
Filler Content	40 %	40 %	DAM
Water Absorption	1.6 %	1.6 %	Equilibrium 50%RH; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.6 %	5.6 %	Saturation, immersed; DAM; ISO 62, Similar to
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Linear Mold Shrinkage, Flow	0.0050 cm/cm	0.0050 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Transverse	0.0070 cm/cm	0.0070 in/in	DAM; ISO 294-4
	@Thickness 2.00 mm	@Thickness 0.0787 in	

Mechanical Properties	Metric	English	Comments
Tensile Strength at Break	80.0 MPa	11600 psi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	140 MPa	20300 psi	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Elongation at Break	3.0 %	3.0 %	DAM; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	6.0 %	6.0 %	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tensile Modulus	4.60 GPa	667 ksi	50%RH; ISO 527
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	8.30 GPa	1200 ksi	

Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	DAM: ISO 527 Comments
Izod Impact, Notched (ISO)	4.00 kJ/m²	1.90 ft-lb/in²	DAM; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.50 kJ/m²	2.62 ft-lb/in²	DAM; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	5.50 kJ/m²	2.62 ft-lb/in²	50%RH; ISO 180/1A
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	9.00 kJ/m²	4.28 ft-lb/in²	50%RH; ISO 180/1A
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact Unnotched	5.00 J/cm²	23.8 ft-lb/in²	DAM; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	5.00 J/cm²	23.8 ft-lb/in²	50%RH; ISO 179/1eU
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	6.00 J/cm²	28.6 ft-lb/in²	DAM; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	6.50 J/cm²	30.9 ft-lb/in²	50%RH; ISO 179/1eU
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Charpy Impact, Notched	0.400 J/cm²	1.90 ft-lb/in²	50%RH; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.550 J/cm²	2.62 ft-lb/in²	DAM; ISO 179/1eA
	@Temperature -30.0 °C	@Temperature -22.0 °F	
	0.700 J/cm²	3.33 ft-lb/in²	DAM; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	
	1.20 J/cm²	5.71 ft-lb/in²	50%RH; ISO 179/1eA
	@Temperature 23.0 °C	@Temperature 73.4 °F	

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	500 µm/m-°C	278 µin/in-°F	DAM; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	500 µm/m-°C	278 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 -	@Temperature 73.4 -	

Thermal Properties	55.0 °C Metric	131 °F English	Comments
CTE, linear, Transverse to Flow	77.0 µm/m-°C	42.8 µin/in-°F	DAM; ISO 11359-1/-2
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
	77.0 µm/m-°C	42.8 µin/in-°F	DAM; ASTM E 831
	@Temperature 23.0 - 55.0 °C	@Temperature 73.4 - 131 °F	
Melting Point	221 °C	430 °F	10°C/min; DAM; ISO 11357-1/-3
Deflection Temperature at 1.8 MPa (264 psi)	195 °C	383 °F	DAM; ISO 75-1/-2

Processing Properties	Metric	English	Comments
Melt Temperature	260 - 280 °C	500 - 536 °F	DAM
	270 °C	518 °F	DAM; Optimum
Mold Temperature	70.0 - 120 °C	158 - 248 °F	DAM
	100 °C	212 °F	DAM; optimum
Drying Temperature	80.0 °C	176 °F	DAM
Dry Time	2.00 - 4.00 hour	2.00 - 4.00 hour	DAM
Moisture Content	<= 0.20 %	<= 0.20 %	DAM

Descriptive Properties	Value	Comments
Appearance	Natural Color	DAM
Drying Recommended	Yes, if moisture content of resin exceeds recommended level	DAM
Features	Warp Resistant	DAM
	Warpage, Low	DAM
Filler	Glass/Mineral	DAM
Forms	Pellets	DAM
Generic	Nylon 6	DAM
Heat Stabilized	Yes	DAM
Material Status	Current	DAM
Part Marking Code	>PA6-(MD+GF)40<	ISO 11469; DAM
Polymer Family	Polyamide	DAM

Descriptive Properties Polymer Type	Value PA6	Comments DAM
Processing Method	Injection Molding	DAM
Product Category	Glass/Mineral Reinforced Resins	DAM
	Low Warp Resins	DAM
Region Available - Global	Yes	DAM
Resin Identification	PA6-(MD+GF)40	ISO 1043; DAM
RoHS Compliance	Contact Manufacturer	DAM
Ultrasonic Weldable	Yes	DAM

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